

Main Range.	Waianae Range.
<i>Spirizona nigrolabris.</i>	<i>Spirizona.</i>
<i>Spirizona chlorotica.</i>	
	<i>Intermedia.</i>
<i>Porphyrea.</i>	<i>Porphyrea.</i>
<i>Porphyrostoma.</i>	<i>Cylindrica.</i>
	<i>Variiegata.</i>

THE LAND MOLLUSCA OF SAN MATEO POINT, CALIFORNIA.

BY HARRY EDSON.

San Mateo Point is a heavily-wooded knoll containing about one and one-half acres of ground, on the San Francisco bay coast midway between San Mateo and Burlingame. It is practically an island as far as the land mollusca are concerned, being entirely surrounded by water and salt marsh with the exception of a wagon road that during the rainy season, the only time the snails travel in California, is covered with water most of the time, so that there has been no very recent addition to the molluscan fauna, which is rather large considering the area of the collecting ground, and that the nearest place any molluscs are found is over three miles away with the town of San Mateo and the salt marsh intervening.

LIST OF SPECIES.

Epiphragmophora arrosa, Gould, found in large numbers on the western or bay side exposure. I was unable to find any on the opposite side.

This species showed a very great variation, running from a very dark shell with no superior color band to a light-colored shell with dark band, also an albino form some without any band and others banded, one of the latter had a bright orange band.

Epiphragmophora nickliniana, Lea. This shell was found rather sparingly, buried under the debris in some small water channels running from the center of the point.

Circinaria vancouverensis, Lea, a few specimens found on the west side.

Circinaria durantii, Newc., found on a little hill in the center of the point that the Indians had evidently used as a place to hold clam bakes.

Punctum conspectum, Bland, found in large numbers around the roots of the Eucalyptus trees on the east side.

Zonitoides minuscula, Binney, found at the roots of the Eucalyptus trees.

Mr. E. W. Gifford¹ reported finding *Epiphragmophora fidelis*, Gray, at San Mateo Point, but I regard this as erroneous as the farthest south it is known is the form *infumata*, Gould, found as far south as Santa Rosa. As there is no land connection between there and San Mateo Point, the only explanation would be that they were washed into the bay on a log or a tree and drifted to the point; but this is highly improbable, as they would have to stand immersion in the salt water for many days, and I am positive that it does not occur there now, so it is quite probable that he mistook one of the light forms of *Epiphragmophora arrosa*, Gld., for *fidelis*, Gray.

NOTES ON OREOHELIX.

BY L. E. DANIELS.

During the fall of 1909 in company with J. H. Ferriss, I collected snails in the Kaibab Mountains and the Grand Canyon of the Colorado. *Oreohelix strigosa depressa* Ckll. was the most abundant species north of the canyon, *O. yavapai* Pils., on the south side.

A few notes may be of interest to the readers of THE NAUTILUS.

Oreohelix is viviparous, and when cleaning the shells if I observed one that was gravid I made note of the number and color of the embryos.

The first *Oreohelix s. depressa* collected was on August 28th on Powell Plateau, and when cleaned nearly one-third were found to be gravid, with from four to eight young in each shell, the young consisting of from one and one-half to two and one-half whorls; all of the adult shells were brown with dark bands, and the young were all brown. Very few of the embryonic shells show bands and then only a faint trace.

The last station, Spectacle Cove in the Grand Canyon, was collected on October 23d, the number taken was 456 *O. yavapai*. Only ten were gravid, or one in forty-five. Six of these contained two, three contained three and one four embryos. This lot was

¹ NAUTILUS, XIV, page 144, 1901.